Toward a National Marine Conservation Area in the Southern Strait of Georgia

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Abstract
Parks Canada is committed to creating a system of National Marine Conservation Areas (NMCA) through the establishment of one NMCA in each of the 29 marine regions that have been identified in Canada's three oceans and the Great Lakes. Of these 29 regions, five occur on the Pacific coast: Hecate Strait, the Queen Charlotte Islands Shelf, Queen Charlotte Sound, the Vancouver Island Shelf and the Strait of Georgia. Parks Canada, in partnership with British Columbia and Fisheries and Oceans Canada, is now proceeding with studies to assess the feasibility of establishing NMCAs in two of these regions, adjacent to Gwaii Haanas National Park Reserve in the Queen Charlotte Islands Shelf and Hecate Strait regions and in the southern Strait of Georgia, adjacent to the proposed national park in the southern Gulf Islands.

The purpose of the feasibility study is to determine whether or not the establishment of the proposed NMCA in the southern Strait of Georgia is practical and desirable, both from a policy perspective and in terms of public support. The assessment of feasibility must determine, on the one hand, whether the establishment and management of a NMCA in the southern Strait of Georgia, with a particular boundary configuration, can reasonably be expected to achieve the objectives prescribed for it. These objectives will be defined by both Parks Canada policies with respect to the establishment and management of NMCAs and by the aspirations of other federal and provincial government agencies, municipal and regional governments, First Nations, stakeholders and local residents. Aided by an effective communications plan, and both broad and narrowly focused consultations, the feasibility study must also determine whether there is sufficient public support to proceed with NMCA establishment. This paper will explore the planning framework being proposed for the feasibility study and its expected outcomes.

Introduction
Canada's system of national parks is one of the oldest and largest in the world. It is internationally acclaimed and is a source of considerable national identity and pride. Few national parks, however, afford any measure of protection to our marine environments. In recognition of this, and building upon growing world and Canadian concern for the protection of the marine environment, Parks Canada launched the National Marine Parks program in 1986, which has since been renamed the National Marine Conservation Areas (NMCAs) program.

The approved system plan for NMCAs in Canada, entitled *From Sea to Sea to Sea*, sets out the goal of Parks Canada to create a national system of NMCAs through the establishment of one NMCA to represent each of the 29 marine regions that have been identified in Canada's three oceans and the Great Lakes (Figure 1) (Parks Canada, 1995). The Strait of Georgia Marine Region is one of these. Being a relatively new program, only two NMCAs currently exist in Canada: Fathom Five in Georgian Bay in Ontario, and the Saguenay-St. Lawrence Marine Park at the confluence of the Saguenay and St. Lawrence rivers in Quebec. A study to assess the feasibility of establishing a new NMCA in western Lake Superior has been completed and discussions are underway with Ontario toward its establishment. In addition, Canada and British Columbia agreed in 1988 to establish an NMCA in the ocean waters surrounding the new Gwaii Haanas National Park Reserve in the southern Queen Charlotte Islands (Haida Gwaii) and steps required to achieve this are continuing.

Under the terms of the 1995 federal-provincial agreement between Canada and British Columbia, known as the Pacific Marine Heritage Legacy (PMHL), Canada and BC are jointly undertaking to:

- Assemble lands in the southern Gulf Islands to establish a new national park and additional provincially protected areas.
- Assess the feasibility of establishing a national marine conservation area (NMCA) in the ocean waters surrounding the Gulf Islands in the southern Strait of Georgia.

Figure 2 illustrates the location of the proposed national park reserve and the preliminary study area for the proposed NMCA. Commencement of the feasibility study process for the proposed NMCA was jointly announced by Canada and BC in November, 1998, although progress has been hampered by fiscal constraints.

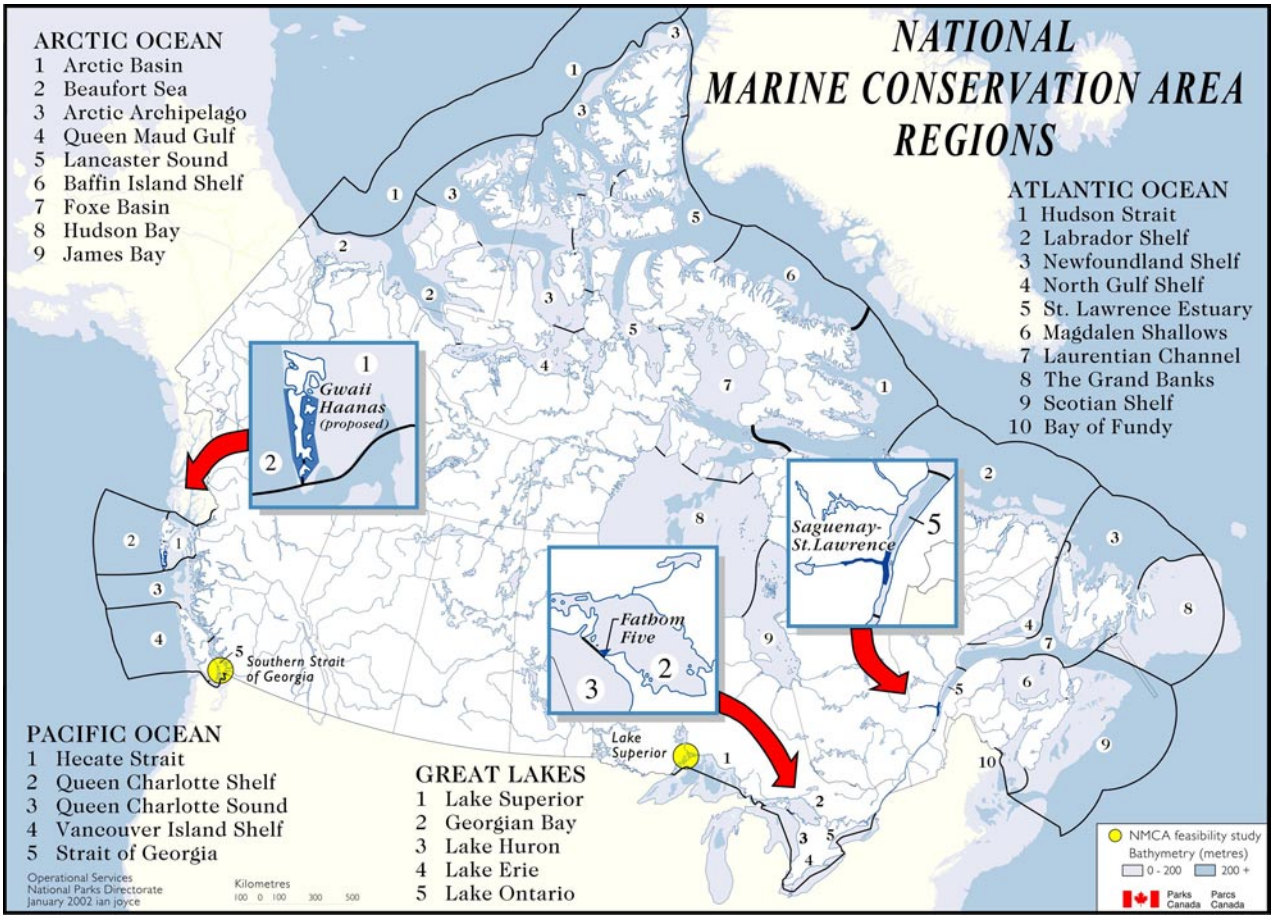

Figure 1. Parks Canada's system plan calls for the establishment of one NMCA in each of the 29 Marine Regions across the country.

In October 2002, the Right Honourable Jean Chretien, Prime Minister of Canada announced Canada's intent to create 10 new national parks and five national marine conservation areas across the country within the next five years. This announcement reconfirmed Canada's commitment to the establishment of the new national park in the southern Gulf Islands and steps toward an NMCA in the southern Strait of Georgia. Formal establishment and operation of the new national park and the resumption of the feasibility study for the proposed NMCA are anticipated in 2003.

What is a National Marine Conservation Area?

Whereas the primary purpose of a national park is to protect the park ecosystem in a natural state, an NMCA is managed, as its name suggests, to **conserve** marine ecosystems and to manage them for ecologically sustainable use. NMCAs are established under the *Canada National Marine Conservation Areas Act*, enacted in June 2002 (Canada 2002). Additional program guidance is provided by Parks Canada's NMCA Policy (Parks Canada1994). The Act states the purpose of NMCA's as follows:

> "Marine conservation areas are established in accordance with this Act for the purpose of protecting and conserving representative marine areas for the benefit, education and enjoyment of the people of Canada and the world." (Section 4 (1))(Canada 2002)

The specific objectives of NMCAs, as outlined in Parks Canada's Policy for NMCAs, can be characterized as follows:

1. To represent the diverse nature of Canada's marine regions.
2. To conserve marine biological diversity.
3. To maintain the integrity of marine ecosystems.
4. To offer a model for the sustainable utilization of marine species and ecosystems.
5. To encourage marine research and monitoring practices.
6. To protect critical habitat of depleted, threatened, rare or endangered species.

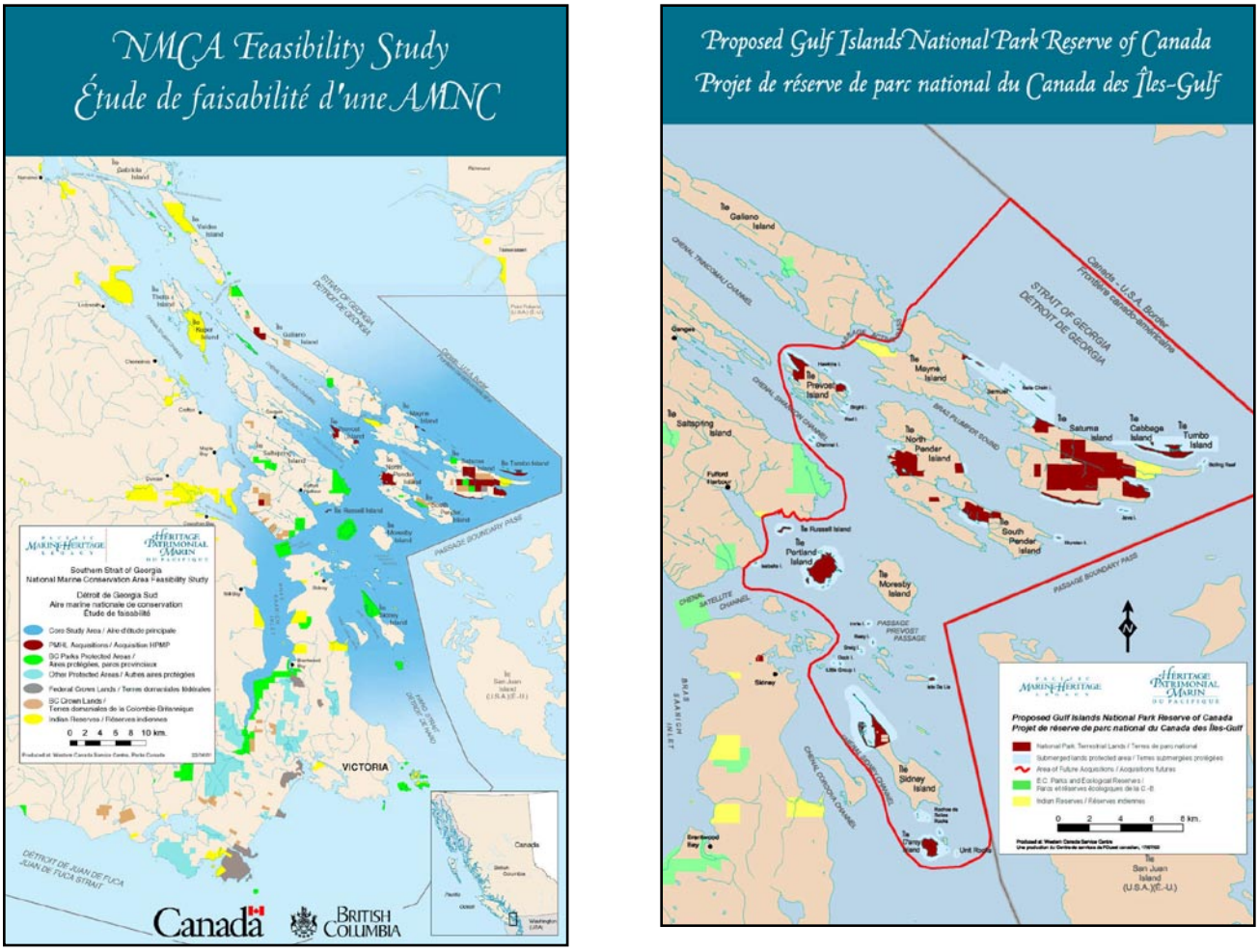

Figure 2. The new national park in the Gulf Islands will encompass approximately 2,600 hectares of land. The preliminary study area for the proposed NMCA in the surrounding waters of the southern Strait of Georgia is approximately 900 square kilometres.

7. To protect and maintain areas critical to species' life cycles.
8. To provide for public enjoyment and the interpretation of marine ecosystems for the purpose of conservation, education, recreation and tourism (Parks Canada 1994).

The *Canada National Marine Conservation Areas Act* addresses the challenges of managing for both protection and wise use of the marine environment. NMCAs must, by law, include the seabed and its subsoil as well as the overlying water column, with one result being that management initiatives will be ecosystem-based to the maximum extent possible. In coastal areas, they may also include such features as islands, estuaries, wetlands or other coastal lands. Wherever practical, NMCAs may be established adjacent to terrestrial national parks, provincial parks or other protected areas, to further enable an ecosystem-based approach to management and, in particular, to provide additional protection from land-based sources of disturbance. In the case of the southern Strait of Georgia, the proposed NMCA would include the submerged lands and waters adjacent to the new national park reserve in the southern Gulf Islands.

To adequately represent a marine region and the ecological processes within it, NMCAs will tend to be relatively large compared to other kinds of marine protected areas. Parks Canada anticipates that NMCAs will be established in sizes ranging from hundreds to thousands of square kilometres. For example, the Saguenay - St. Lawrence Marine Park is 1,138 square kilometres; the proposed NMCA at Gwaii Haanas is 3,180 square kilometres in size. The study area for the proposed NMCA in Lake Superior is 10,000 square kilometres. While most MPAs worldwide are smaller, such large multiple use oriented marine protected areas are becoming more common. On the west coast of the United States, the Monterey Bay and Olympic Coast national marine sanctuaries are 13,800 and 8,600 square kilometres respectively. The Great Barrier Reef Marine Park is over 340,000 square kilometres, and one of Australia's newest MPAs, Macquarie

Island Marine Park, is 162,000 square kilometres in size. As discussed below, the study area for the proposed NMCA in the southern Strait of Georgia is large by current standards in BC, but relatively small in comparison to many multiple use MPAs worldwide.

The Focus is on Marine Conservation and Ecologically Sustainable Use

One of the hallmark characteristics of NMCAs is their focus on the conservation of marine ecosystems and the provision for ecologically sustainable use in perpetuity. Section 4(3) of the *Canada National Marine Conservation Areas Act* makes this purpose clear:

> "Marine conservation areas shall be managed and used in a sustainable manner that meets the needs of present and future generations without compromising the structure and function of the ecosystems, including the submerged lands and water column, with which they are associated." (Canada 2002)

The Act accepts in its preamble the fundamental premise that "the protection of natural, self-regulating marine ecosystems is important for the maintenance of biological diversity". The preamble also adopts the precautionary principle as one of its basic tenets, noting that "...where there are threats of environmental damage, lack of scientific certainty is not used as a reason for postponing preventive measures". Hence, the principles of ecosystem management and the precautionary principle are two primary considerations in the implementation of the legislation to ensure the protection of ecosystems and maintenance of biological diversity (see Section 9(3)) (Canada 2002).

As noted in Parks Canada's policy for NMCAs, this approach to their management will entail:

> "...the management of a wide range of human activities to ensure the greatest sustainable benefit to present generations while maintaining the potential of the area to meet the needs and aspirations of future generations. In this context, conservation embraces a number of management concepts, including preservation, maintenance, sustainable use, and restoration of the natural marine environment." (Parks Canada 1994)

Certain activities such as commercial fishing, shipping, the placement and operation of utility corridors and a variety of recreational uses can continue in NMCAs, in accordance with approved management plans prepared in consultation with all affected parties. However, the exploration for, and development of non-renewable resources, (including oil, natural gas, minerals and aggregates) will be prohibited throughout NMCAs. Such activities as ocean dumping or the disposition of the seabed are only permissible under permit.

The Act also requires that the waters of NMCAs be internally zoned to provide for the full range in levels of protection from complete protection at one end of the spectrum to multiple use on the other. One of the functions of the feasibility study will be to design a system of marine reserves for the proposed NMCA that will help achieve the mandate for representation, the maintenance of biological diversity and the protection of natural, self-regulating marine ecosystems.

Why is the Southern Strait of Georgia being considered for an NMCA?

Parks Canada has undertaken an analysis of the entire Strait of Georgia Marine Region to identify potential candidates for an NMCA. The study identified three possible candidate areas in the Strait, including: (1) Saanich Inlet; (2) the southern Strait of Georgia surrounding the southern Gulf Islands; and (3) the Desolation Sound/Bute Inlet area (Parks Canada 1993). The Desolation Sound/Bute Inlet area was considered to be insufficiently representative of the Strait of Georgia, and was dropped from further consideration. The southern Strait of Georgia was found to be rich in marine biodiversity and, especially when combined with Saanich Inlet, highly representative of the marine region. With its complex bottom topography, strong tidal currents and upwellings, the marine environments surrounding the southern Gulf Islands are known for their diverse intertidal and subtidal communities, rich in invertebrates, fishes, marine mammals and sea birds.

The subtidal communities throughout the island waters are rich and varied, with a wide diversity of species present including anemones, sea urchins, a variety of crabs and sea stars, and Pacific octopus. In the pelagic realm, herring, the five species of Pacific salmon, Pacific cod, lingcod and several species of rockfish are common, although past levels of fishing have left some populations in depleted condition. Harbour seals and wintering Stellar's and California sea lions are frequently observed. Killer whales (orca), Dall's porpoise and harbour porpoise are also common in the area. Gray and minke whales are regular visitors to these waters, and humpback whales, which were once resident in the Strait, are beginning to make a comeback.

Small colonies of Glaucous-winged gulls, Pelagic and Double-crested cormorants are scattered throughout the area, as are breeding sites for bald eagles and Pigeon guillemots. The marine waters throughout the islands and channels are particularly important to migrating and wintering populations of loons, cormorants, grebes, murres, gulls and ducks.

Figure 3. The copper rockfish is one of several species of rockfish found in the southern Strait of Georgia.

It is also recognized, however, that the area is not as natural as it once was, and that the southern Strait of Georgia is one of the busiest and most utilized marine areas on Canada's west coast with extensive fisheries, shipping and recreational use. These waters are among the most popular destinations for marine and coastal recreation and tourism on the Pacific coast, and in all of Canada. While this range of activities presents many management challenges, this is where conservation efforts are most required, and this is the area among others in the Strait of Georgia that stands to benefit the most from the comprehensive and integrated conservation programs that NMCAs have to offer.

Additionally, an NMCA in this area would hold very high potential for reaching large numbers of Canadians with Parks Canada's interpretation and education programs, for fostering environmental stewardship among local residents and visitors for the conservation of the marine environment, and for encouraging scientific research given the array of nearby research institutions.

Wherever practical, Parks Canada attempts to establish national parks and NMCAs side-by-side. This congruity of terrestrial and marine protected areas will enable Parks Canada and its partners to manage, to the greatest extent possible, the marine and coastal ecosystem as an integral ecological unit. The impacts of coastal land use on the marine environment, in particular, would be reduced. In addition, the efficiency and cost-effectiveness of protected area management is increased substantially by combining administration, resource and visitor management, heritage presentation and enforcement responsibilities.

The Current NMCA Study Area

The proposed study area for the NMCA feasibility study generally includes the waters surrounding the southern Gulf Islands. The core of this study area, shown previously in Figure 2, encompasses an area of approximately 900 square kilometres and extends from Haro Strait in the south to the waters of Active Pass, southern Trincomali Channel and the southern shores of Salt Spring Island, including Saanich Inlet. These boundaries are flexible, however, and as has been suggested in early consultations with numerous government agencies, First Nations and stakeholders since 1998, the feasibility study for an NMCA could encompass up to 1500 square kilometres of ocean waters. An early task of the feasibility study will be to determine whether the study area should extend further south and north to embrace more waters among the southern Gulf Islands. Should the study's recommendations to governments support the establishment of an NMCA, such recommendations would include a proposed boundary.

What Does a Feasibility Study Set Out to Accomplish?

The central purpose of the feasibility study is to determine whether or not the establishment of a proposed NMCA in the southern Strait of Georgia is practical and desirable, both from a policy and administrative perspective and in terms of public support. The assessment of feasibility must determine, on the one hand, whether the establishment and management of an NMCA in the southern Strait of Georgia, with a particular boundary configuration, can reasonably be expected to achieve the objectives prescribed for it. These objectives will be defined by both Parks Canada's legislation and policies with respect to the establishment and management of NMCAs and by the aspirations of other federal and provincial government agencies, municipal and local governments, First Nations, stakeholders and local residents. Aided

Figure 4. Portland Island will become part of the new national park in the Gulf Islands and is surrounded by ocean waters being considered as part of the proposed NMCA.

by an effective communications plan, and both broad and narrowly focussed consultations, the feasibility study must also determine whether there is sufficient public support to proceed with NMCA establishment. Parks Canada has been clear in its position that the establishment of an NMCA would not proceed without broad public support.

Consistent with the overall objectives for NMCAs as discussed above, the specific objectives for this feasibility study are as follows:

- To develop a common vision for the long-term management of the marine ecosystem in the southern Strait of Georgia.
- To clarify the natural and cultural values in the marine environment of the study area, both in terms of their inherent, intrinsic values and their value, in economic and social terms, to communities, residents and stakeholders.
- To clarify the threats to these values, and the impediments to effective management and mitigation of human-induced impacts.
- To determine the requirements for maintaining a healthy marine environment, conserving marine biological diversity, protecting critical habitats and maintaining the overall integrity of the marine ecosystem.
- To develop a model for the ecologically sustainable use of species and ecosystems, incorporating strategic directions for the management of all fisheries, point and non-point sources of pollution, marine transportation, and recreation and tourism, in accordance with the precautionary principle.
- To assess the potential socio-economic impacts and benefits of alternative models for ecologically sustainable use.
- To determine requirements and strategic direction for public enjoyment of the marine environment and for building awareness of marine environmental issues in support of conservation and ecologically sustainable use.
- To identify requirements for marine research and long term monitoring.
- To develop a governance model that effectively integrates the interests of governments and First Nations, that creates the necessary partnerships in management and that promotes a strong sense of stewardship among all interests. (Parks Canada 1994)

The feasibility study will enable governments, First Nations, stakeholders, local residents and the public to collectively determine whether NMCA establishment should proceed and under what conditions. Specific results would include:

- A common vision for the long-term management of the marine environment.
- A set of clearly defined goals and objectives for the NMCA.
- The identification and analysis of specific issues of concern within the study area to governments, first nations, local communities and stakeholders.
- A set of strategic actions and management recommendations on how these issues are to be addressed and how the proposed goals and objectives are to be achieved.
- A draft zoning concept with a description of the purpose and objectives for each zone.
- A proposed NMCA boundary.
- A proposed governance model.

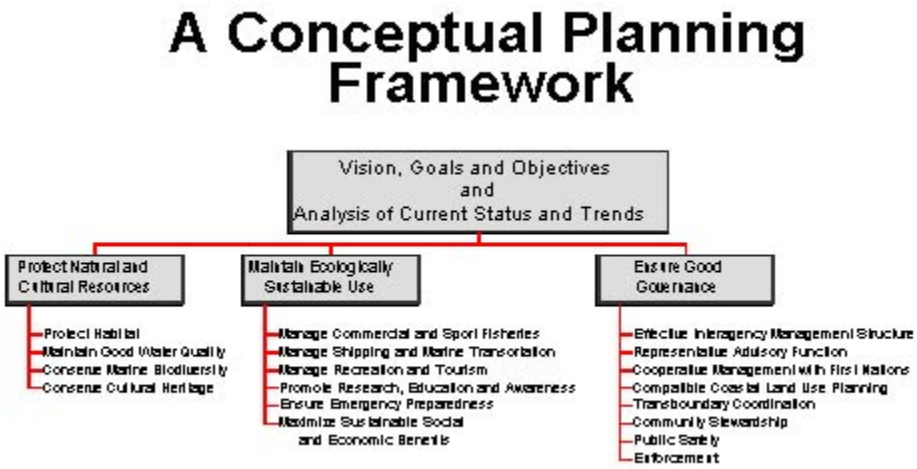

Figure 5. A conceptual planning framework.

A Conceptual Planning Framework for the Feasibility Study

To achieve the above, a planning process will be put in place based on the conceptual framework shown in Figure 5 above. The framework flows from the development of a common vision, and specific goals and objectives, for the NMCA, informed by an analysis of the current status of, and noticeable trends in, the ecological and socio-economic parameters being considered in the study. These would include, for example, the status and trends in water quality, and sea bird, fish and marine mammal populations, and the demographics of the Gulf island communities, the health the local commercial fishery or existing management practices in commercial shipping. The planning process will then seek to develop specific recommendations under three umbrella categories: (1) Protect Natural and Cultural Resources; (2) Maintain Ecologically Sustainable Use; and (3) Ensure Good Governance.

References

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